Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A system for shunting cerebrospinal fluids from a brain ventricle to the sinus system of an individual, said system comprising:

i) a shunt body allowing fluid communication between a brain ventricle and a part of the sinus system of the individual,

wherein said shunt body comprises a flow restricting component capable of maintaining a passive and essentially constant resistance to flow of cerebrospinal fluids through the shunt body,

ii) a brain ventricle catheter connected to the shunt body at a first location thereof,

wherein the brain ventricle catheter is capable of draining cerebrospinal fluids from a brain ventricle to the shunt body, and

iii) a sinus catheter connected to the shunt body at a second location thereof,

wherein the sinus catheter is capable of draining, to the sinus system of the individual, cerebrospinal fluids having been drained from the brain ventricle and passed through the flow restricting component of the shunt body to the sinus catheter,

wherein i) the internal or external surface of the shunt body, or ii) the internal or external surface of the brain ventricle catheter, or iii) the internal or external surface of the sinus catheter, comprises a biocompatible and/or hemocompatible material comprising an inert surface preventing biological material from maintaining longer lasting contact with the inert surface, wherein said hemocompatible material is ~~preferably~~ optionally coated with a plurality of charged species capable of increasing the hemocompatibility of the surface.

2. (Original) The shunt system for shunting cerebrospinal fluids according to claim 1, wherein the flow restricting component is capable of maintaining a resistance to flow of cerebrospinal fluids of a constant value of from 0.1 to less than 8 mm Hg/ml/min.

Claims 3-4 (Cancelled).

5. (Original) The shunt system for shunting cerebrospinal fluids according to claim 1, wherein the flow restricting component is capable of maintaining a passive resistance to flow of cerebrospinal fluids of a constant value of from 2 to less than 8 mm Hg/ml/min.

Claim 6-19 (Cancelled).

20. (Original) The shunt system for shunting cerebrospinal fluids according to claim 1, wherein the flow

restricting component is capable of maintaining a passive resistance to flow of cerebrospinal fluids of a constant value of from 2 to 7 mm Hg/ml/min.

Claims 21-23 (Cancelled).

24. (Original) The shunt system for shunting cerebrospinal fluids according to claim 1, wherein the flow restricting component is capable of maintaining a passive resistance to flow of cerebrospinal fluids of a constant value of from 4 to less than 8 mm Hg/ml/min.

Claim 25 (Cancelled).

26 (Currently Amended) The shunt system according to ~~any of claims 1 to 25~~ claim 1 wherein the flow restricting component is selected from the group consisting of a tubular structure, a plurality of tubular structures, a porous mass, a fibrous mass, a structure being restricted by co-extending fibres arranged therein, and a structure being restricted by co-extending rods arranged therein.

27 (Currently Amended) The shunt system according to ~~any of claims 1 to 25~~ claim 1 wherein the flow restricting component comprises at least one tubular structure having an internal radius of more than 0.05 mm and ~~preferably~~ less than 0.50 mm~~, for example a tubular structure having an internal radius of about 0.06 mm, for example about 0.07 mm, such as about~~

~~0.08 mm, for example about 0.09 mm, such as about 0.10 mm, for example about 0.11 mm, such as about 0.12 mm, for example about 0.13 mm, such as about 0.14 mm, for example about 0.15 mm, such as about 0.16 mm, for example about 0.17 mm, such as about 0.18 mm, for example about 0.19 mm, such as about 0.20 mm, for example about 0.21 mm, such as about 0.22 mm, for example about 0.23 mm, such as 0.24 mm, for example 0.25 mm, such as 0.26 mm, for example 0.27 mm, for example about 0.28 mm, such as about 0.29 mm, for example about 0.30 mm, such as 0.31 mm, for example 0.32 mm, such as 0.33 mm, for example 0.34 mm, for example about 0.35 mm, such as about 0.36 mm, for example about 0.37 mm, such as 0.38 mm, for example 0.39 mm, such as 0.40 mm, for example 0.42 mm, for example about 0.44 mm, such as about 0.46 mm, for example a tubular structure having an internal radius of about 0.48 mm~~.

28 (Currently Amended) The shunt system according to ~~any of claims 26 and 27~~ claim 26, wherein the flow restricting component comprises a single tubular structure having an internal diameter of less than 0.2 mm.

29 (Currently Amended) The shunt system according to ~~any of claims 26 to 28~~ claim 26, wherein the length of the at least one tubular structure is in the range of from about 3.0 mm to about 90 mm~~, such as from about 3.0 mm to about 80 mm, for example from about 3.0 mm to about 75 mm, such as from about 3.0 mm to about 70 mm, for example from about 3.0 mm to about 65 mm,~~

~~such as from about 3.0 mm to about 60 mm, for example from about 3.0 mm to about 55 mm, such as from about 3.0 mm to about 50 mm, for example from about 3.0 mm to about 45 mm, such as from about 3.0 mm to about 40 mm, for example from about 3.0 mm to about 35 mm, such as from about 3.0 mm to about 30 mm, for example from about 3.0 mm to about 25 mm, such as from about 3.0 mm to about 22 mm, for example from about 3.0 mm to about 20 mm, such as from about 3.0 mm to about 18 mm, for example from about 3.0 mm to about 16 mm, such as from about 3.0 mm to about 14 mm, for example from about 3.0 mm to about 12 mm, such as from about 3.0 mm to about 10 mm, for example from about 10 mm to about 90 mm, such as from about 10 mm to about 80 mm, for example from about 10 mm to about 75 mm, such as from about 10 mm to about 70 mm, for example from about 10 mm to about 65 mm, such as from about 10 mm to about 60 mm, for example from about 10 mm to about 55 mm, such as from about 10 mm to about 50 mm, for example from about 10 mm to about 45 mm, such as from about 10 mm to about 40 mm, for example from about 10 mm to about 35 mm, such as from about 10 mm to about 30 mm, for example from about 10 mm to about 25 mm, such as from about 10 mm to about 20 mm, for example from about 10 mm to about 15 mm, such as about 10 mm, for example about 15 mm, such as about 20 mm, for example about 22 mm, such as about 24 mm, for example about 26 mm, such as about 20 mm, for example about 22 mm, such as about 24 mm, for example about 26 mm, such as about 28 mm, for example about 30 mm, such as about**

~~32 mm, for example about 34 mm, such as about 36 mm, for example about 38 mm, such as about 40 mm, for example about 45 mm, such as about 50 mm, for example about 55 mm, such as about 60 mm, for example about 65 mm, such as about 70 mm, for example about 75 mm, such as about 80 mm, for example about 85 mm~~.

30 (Original) The shunt system according to claim 29, wherein the total length of the at least one tubular structure is divided in two or more individual segments.

31 (Currently Amended) The shunt system according to ~~any of claims 1 to 30~~ claim 1 further comprising at least one check valve located within the shunt body for preventing cerebrospinal fluid from flowing back from the sinus catheter to the brain ventricle catheter.

32 (Original) The shunt system according to claim 31, wherein said at least one check valve does not have any inherent resistance or opening pressure and essentially does not exert any resistance on the flow of cerebrospinal fluid through the shunt body.

33 (Currently Amended) The shunt system according to claim 31 ~~and 32~~, wherein the resistance to flow through the shunt body is independent of said at least one check valve and defined solely by the flow resistance of the flow restricting component.

34 (Currently Amended) The shunt system according to ~~any of claims 31 to 33~~ claim 31, wherein the operation of said at least one check valve is independent of a predetermined opening pressure to be overcome by the differential pressure defined by the difference between the intracranial pressure and the pressure in the sinus.

35 (Currently Amended) The shunt system according to ~~any of claims 31 to 34~~ claim 31, wherein said at least one check valve comprises a ball valve and optionally further comprises valve members selected from the group consisting of guided rigid valve members and flexible valve members, including rigid, ring shaped valve members, and flexible valve members ~~such~~ optionally as tongue-shaped laminae.

36 (Currently Amended) The shunt system according to ~~any of claims 31 to 35~~ claim 31, wherein said at least one check valve comprises a mitral silicone valve.

37 The shunt system according to ~~any of claims 1 to 36~~ claim 1, wherein the brain ventricle catheter is connected to a first end location of said shunt body, and wherein said sinus catheter is connected to a second end location of said shunt body.

38 (Currently Amended) The shunt system according to ~~any of claims 1 to 37~~ claim 1 further comprising a shunt body

(10) made from silicone rubber, an antechamber (11) having opposite flat walls (12) made from hard silicone rubber, and opposite domed walls (13) made from soft, perforatable, self-healing silicone rubber,

wherein at the proximal end (the top end) the chamber walls end in a tapering end comprising a tip (14), to which a brain ventricle catheter (15) can be connected and secured,

wherein the antechamber (11) is connected to the tubular flow restricting component (16) so that the distal end of the chamber (11) forms an inlet to a tubular flow restricting component (16),

wherein a check valve or non-return valve (17) is arranged both at the entrance to the antechamber (11) and at the outlet of the tubular flow restricting component (16),

wherein fluidic connection to the sinus system of the invividual is provided by a tubular drain (18), and

wherein fluidic connection to a brain ventricle of the invividual is provided by a brain ventricle catheter (15).

Claims 39-47 (Cancelled).

48 (Currently Amended) A method for implanting different catheters of a cerebrospinal fluid shunt system into a brain ventricle and the sinus system, respectively, of an individual, said method comprising the steps of

i) providing a shunt system according to ~~any of claims 1 to 47~~ claim 1,

ii) placing the shunt body of the shunt system subcutaneously on top of the calvarium of an individual, optionally behind the coronal suture on one side of the sagittal suture,

iii) inserting a second end of the brain ventricle catheter in a brain ventricle via a first borehole,

iv) optionally connecting a first end of the brain ventricle catheter to a first location on the shunt body;

v) inserting a second end of the sinus catheter into the sinus system of the individual via a second borehole,

vi) optionally connecting a first end of the sinus catheter to a second location on the shunt body,

wherein the shunt body provides fluidic communication between the brain ventricle catheter and the sinus catheter.

Claims 49-59 (Cancelled).

60 (Currently Amended) A method for shunting cerebrospinal fluid from a brain ventricle to the sinus system of an individual, said method comprising the steps of

i) providing a shunt system according to ~~any of claims 1 to 47~~ claim 1,

ii) inserting the first catheter into a brain ventricle of the individual to drain cerebrospinal fluid from the brain ventricle,

iii) inserting the second catheter into the sinus system of the individual to feed the cerebrospinal fluid via the shunt body into the sinus system,

iV) shunting cerebrospinal fluid from a brain ventricle to the sinus system of an individual

wherein the shunt member providing fluidic communication between the first and second catheters,

Claims 61-84 (Cancelled).